

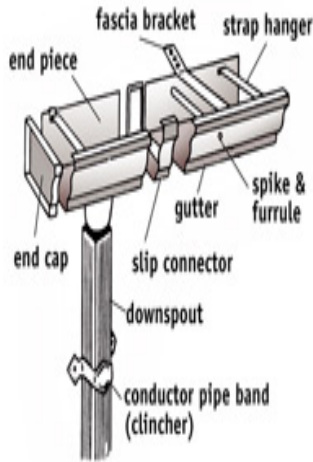


## Clallam Conservation District

(360) 452-1912 ext. 5

<http://clallam.scc.wa.gov/>

### Standard Gutter/ Downspout Installation:



- **One inch of rain falling on a 1,000 square foot roof will produce 625 gallons of water!**
- **Install gutters and downspouts to keep water away from buildings, manure piles and paddocks.**
- **Outlet the water to an unused, vegetated area of your property, away from livestock and buildings.**



# ROOF RUNOFF MANAGEMENT

Mud in paddocks around your barns and outbuildings can be significantly reduced by installing a roof runoff system. When clean water flows off your roof and runs through animal lots, it becomes contaminated with bacteria (from livestock manure) and sediments. The runoff leaving the animal should be contained and kept away from streams and ditches. Installing a roof runoff system will not only reduce mud on our farm, but will also protect water quality by keeping “clean water clean.”

**SIZING GUTTERS & DOWNSPOUTS**– Generally, a small to medium size barn will require four-inch (diameter) gutters. Plan for one downspout for every 1000 square feet of roof. Large barns may require larger gutter diameters and/or additional downspouts to prevent overflow during storm events.

**INSTALLATION**– Gutters should slope toward the downspout approximately 1” for every 70 feet. Mark the slope on the mounting surfaces 3/4” below the shingles. Assemble the gutter sections (using connectors and instructions provided by most home improvement stores) and attach the gutters to fascia board or the rafter ends. The gutters should be mounted every 3 to 4 feet with appropriate mounting devices. To attach the downspout, fit a downspout elbow over the gutter outlet and attach to a second elbow. Attach the downspout to the second elbow, allowing the downspout to fit flush against the building’s wall. The downspouts should be protected from livestock by inserting it through a 5 foot section of 6” steel PVC pipe prior to installation. You can also install fencing or posts to keep livestock from rubbing and damaging the downspout.

**OUTLET**- There are several options for managing roof runoff water once it leaves the downspout. You can direct the water into a drywell, which is an underground storage area that allows water to slowly percolate into the ground. Clallam County has standards and specifications that can be used when sizing and installing a drywell (call the Road Dept. at 417-2379). You can also direct the water into an underground pipe that outlets to a suitable area (vegetated area away from animals and buildings). The underground pipe should be buried about 2 feet deep and should slope at a minimum of 6-inch drop for every 100 feet of pipe. A rodent guard over the mouth of the pipe will prevent access to burrowing animals. Some landowners direct roof runoff water directly into stock tanks or rain barrels. It is important to also install an overflow device on the stock tank or rain barrel to accommodate excess water during storm events (make sure you outlet the overflow water away from paddocks, manure piles or access roads).

